

IN THE CLAIMS:

Cancel claims 5 and 7, amend claims 1-4 and 6-12 and add claims 13-17 as follows:

1. (Currently Amended) Actuator in an automotive vehicle, especially, A ~~power-assisted steering system having a gear mechanism,~~ coupled to a steering column, with a gear and a mating gear, each having teeth via which they engage with each other, movement and power being transmitted from ~~the one~~ gear to the ~~other~~ mating gear via effective profiles of their tooth faces, and where each tooth face comprises a concave region and a convex region, characterized in that ~~wherein~~ the effective profiles of the tooth faces (11, 12) of the gear (1) and the mating gear (2) are made such that a linear contact (3) over the height (h_4 , h_5) of the teeth comes about when the teeth (4, 5) mesh, the contact being formed in such a way that always convex and concave faces of the teeth of the gear and mating gear are in contact ~~engage~~ with each other.

2. (Currently Amended) The actuator ~~power-assisted steering system~~ of claim 1, wherein the a-convex region is with preferably piecewise convex with at least approximately equal curvature of the tooth face (12) of the mating gear (2) is assigned to the ~~a~~ concave region of the tooth face (11) of the gear (1).

3. (Currently Amended) The actuator ~~power-assisted steering system~~ of claim 1, wherein the a-concave region is with preferably piecewise convex with at least approximately equal curvature of the tooth face (12) of the mating gear (2) is assigned to the ~~a~~ convex region of the tooth face (11) of the gear (1).

4. (Currently Amended) The actuator ~~power-assisted steering system~~ of claim 3, wherein the concave region is disposed in a region adjoining a tooth base ~~(6, 8)~~ and the convex region is disposed in a region adjoining a tooth tip ~~(7, 9)~~.

5. (Cancelled)

6. (Currently Amended) The actuator ~~power-assisted steering system~~ of claim 51, wherein the gear mechanism comprises a worm gear mechanism that includes a worm gear ~~(1)~~ and a worm ~~(2)~~.

7. (Cancelled)

8. (Currently Amended) The actuator ~~power-assisted steering system~~ of claim 7, wherein the tooth thicknesses of the worm gear ~~(1)~~ and the worm ~~(2)~~ are adapted to the material properties of the material pairing of the gears.

9. (Currently Amended) The actuator ~~power-assisted steering system~~ of claim 8, wherein the tooth thickness of the teeth ~~(4)~~ of the worm gear ~~(1)~~ is greater than that of the teeth ~~(5)~~ of the worm ~~(2)~~.

10. (Currently Amended) The actuator ~~power-assisted steering system~~ of claim 9, wherein the worm gear ~~(1)~~ is made cylindrical in shape.

11. (Currently Amended) The actuator ~~power-assisted steering system~~ of claim 10, wherein the worm (2) is made globoidal in shape.

12. (Currently Amended) The actuator ~~power-assisted steering system~~ of claim 1, wherein the tooth geometry of the teeth is formed without involutes.

13. (New) The actuator of claim 1, where the worm is metallic and the worm gear is plastic.

14. (New) The actuator of claim 1, where the teeth of the worm and worm gear each have the concave profile in the region near the tooth base and the convex profile in the region near the tooth tip.

15. (New) A gear assembly, comprising:

a worm with a plurality of teeth;

a worm gear with a plurality of worm gear teeth; and

where each of the teeth and each of the worm gear teeth have a concave profile in the region near their tooth base and a convex profile in the region near their tooth tip.

16. (New) The gear assembly of claim 15, where the worm is metallic and the worm gear is plastic.

17. (New) A gear assembly, comprising:

a metallic gear and a plastic mating gear each having teeth via which they engage with each other, movement and power being transmitted from the gear to the mating gear via effective profiles of their tooth faces and where each tooth face comprises a concave region and a convex region, where profiles of the tooth faces of the gear and the mating gear are made such that a linear contact over the height (h_4 , h_5) of the teeth comes about when the teeth mesh, the linear contact being formed in such a way that the convex and concave faces of the teeth of the gear and mating gear are in contact with each other.